SUMMARY

OF THE

1988-89 SURVEY

OF

EDUCATIONAL TECHNOLOGY

IN MANITOBA

Manitoba
Education
and Training

EDUCATIONAL TECHNOLOGY PROGRAM
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I. INTRODUCTION

The Educational Technology Program (ETP) is a major component of the Distance Education and Technology Branch of the Manitoba Department of Education and Training. The mandate of the Educational Technology Program is to assist educators in the implementation of technology in classrooms and schools throughout Manitoba.

The Educational Technology Program is housed in the InfoTech Resource Centre, located in Winnipeg, Manitoba. The InfoTech Resource Centre was established to be a facility for the delivery of technology-related professional development programs. The Educational Technology Program focuses upon providing technology transfer to the Kindergarten to post-secondary educators of Manitoba.

Survey research focusing on the use of educational technology is not new. Since the 1980-81 school year, Manitoba schools have been surveyed in order to examine trends in their acquisition and use of educational technology.

The purpose of the present survey was to:

* determine the installed base of educational technology hardware in Manitoba schools;

* determine the student enrollments in all K-12 educational computing courses;

* identify the directions schools are taking in the application of instructional and administrative technology, (i.e. hardware and/or software purchases, teacher training, etc.); and

* determine the existing numbers and types of audio-visual equipment that might be available for the delivery of Distance Education programmes.

Of the 878 public and private schools surveyed, 678 responded with usable data.

II. HIGHLIGHTS

1. RESPONDING SCHOOLS

* Of the 878 Manitoba public and private schools surveyed, 678 responded with usable data. This is a 77% response rate.

2. COMPUTER HARDWARE

* Ninety-seven percent (97%) of Manitoba schools responding to this survey, indicated that they were using computers during the 1988-89 school year. This has remained constant over the last three years.

* There were 10,212 computers in the schools at the time of the survey. This is a 20% increase over the last survey.

3. ADMINISTRATIVE APPLICATIONS

* The number of schools using administrative applications has grown 31% to 515 since the time of the last survey in 1987-88. Word processing and student records were the administrative applications most frequently reported as being used.

* One hundred and fourteen schools are using the Manitoba School Administrative System (Trevlac) for student record-keeping.

4. PERIPHERAL EQUIPMENT

* There were 3,059 printers in the schools.

* Sixty-seven schools reported having local-area networks.

* Approximately 59% of schools reported having modems. This is almost double the number from the 1987-88 survey.

* CD-ROM and video disc technology are being used in 25 and 15 schools, respectively.

5. MINET (Manitoba Information NETwork)

* There were 376 schools listed as MINET members in 1988-89.

* Five hundred and seven MINET master account and 659 sub-account numbers were issued over the last school year.

6. COMPUTER STUDIES COURSE ENROLLMENTS

* Respondents from the 678 schools reported 108,758 students were enrolled in "computer studies courses". This is approximately a 6,500 student decrease since the time of the last survey.

7. STUDENT-TO-COMPUTER RATIO

* The student-to-computer ratio for Manitoba schools in the 1988-89 school year was calculated at approximately 20:1.

8. EXPENDITURES

* Schools reported spending over 2.8 million dollars on educational technology hardware and $581,078 on software during the 1988-89 school year. Overall there was a decrease from the 1987-88 survey in reported expenditures in the area of administrative software.

9. DISTANCE EDUCATION

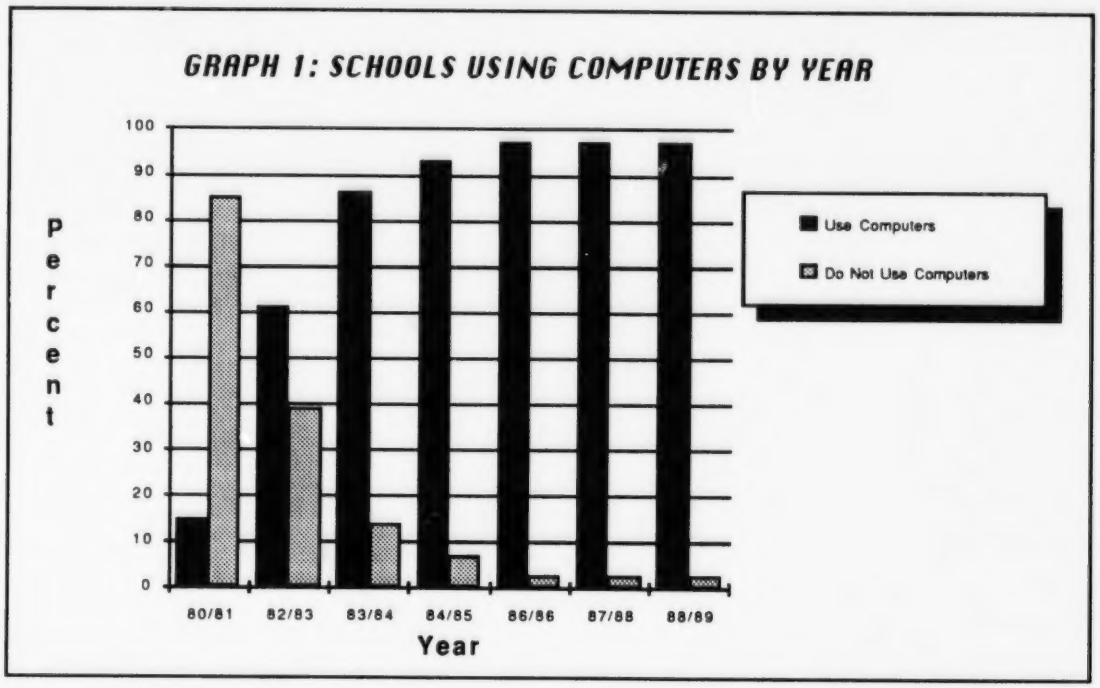
* Most television sets were reported as being over 20" in size and colour in format.

* Schools reported owning 1,352 VCR's and 1,385 16mm film projectors. Most VCR's were reported as being of VHS format.

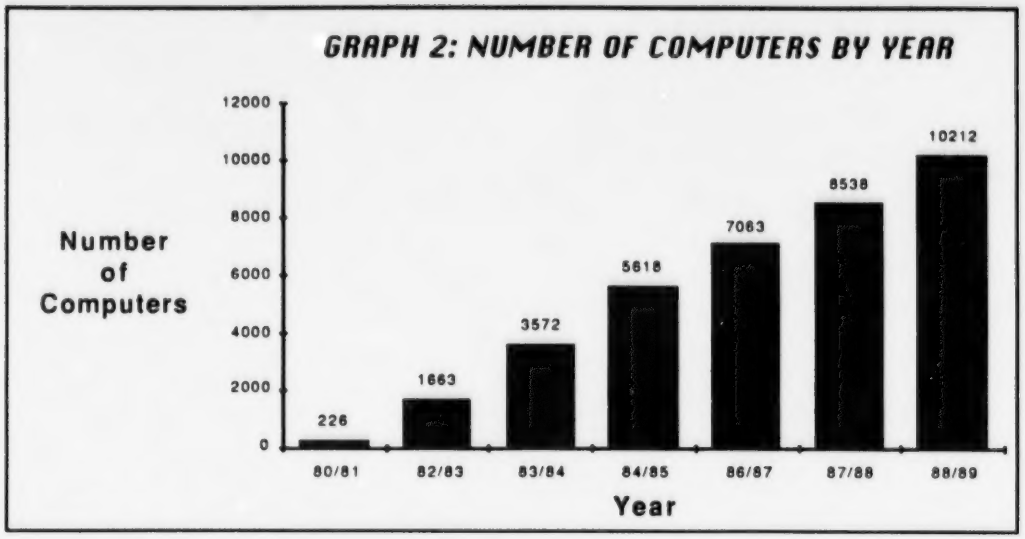
* Schools reported owning 17 FAX machines.

III. COMPUTER HARDWARE

Ninety-seven percent (658) of the 678 schools responding to this survey indicated that they were using computers during the 1988-89 school year (Graph 1).



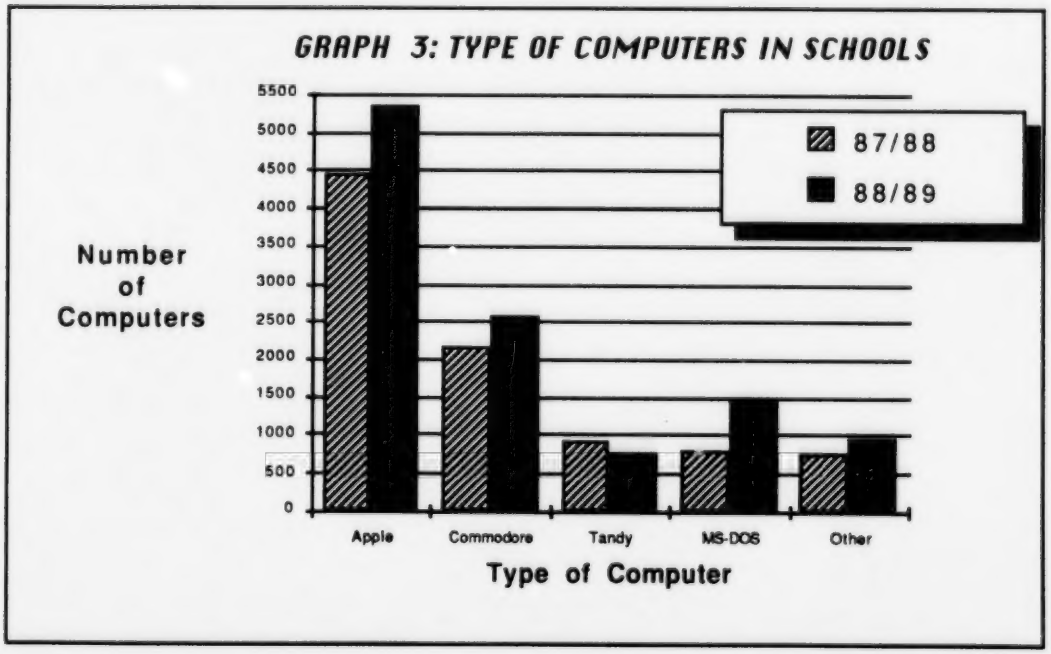
In total, there were 10,212 computers in the schools at the time of the survey representing a 20% increase over the last survey period (Graph 2).



With respect to individual totals, there were 5,335 Apple (II+, IIc, IIe, IIgs, MacIntosh); 2,564 Commodore (PET, C64, C128, PC10); 34 Icon; 768 Tandy (Model III, IV, Tandy 1000, 1200, 3000); 1,453 MS-DOS (539 IBM, 289 Tandy, 604 Commodore, 21 Unisys); and 951 "other" computers, including Mind, Laser, Commodore VIC-20, Franklin ACE, etc.

*Note: Commodore PC10 and Tandy 1000, 1200, 3000 are counted both in their respective manufacturers' totals and also in the overall MS-DOS total.

Graph 3 represents the above figures.



IV. ADMINISTRATIVE APPLICATIONS

There was an increase of 31% in the number of schools reporting the use of microcomputers for administrative purposes.

Word processing (515 schools) and student records (362 schools) were the administrative applications most often reported as being used. Schools most frequently reported using AppleWorks software for these applications.

One hundred and fourteen schools are presently using the Manitoba School Administrative System (Trevlac) for student record-keeping. There were 73 secondary schools (55 rural and 18 urban) and 41 elementary schools (38 rural and 3 urban).

V. PERIPHERAL EQUIPMENT

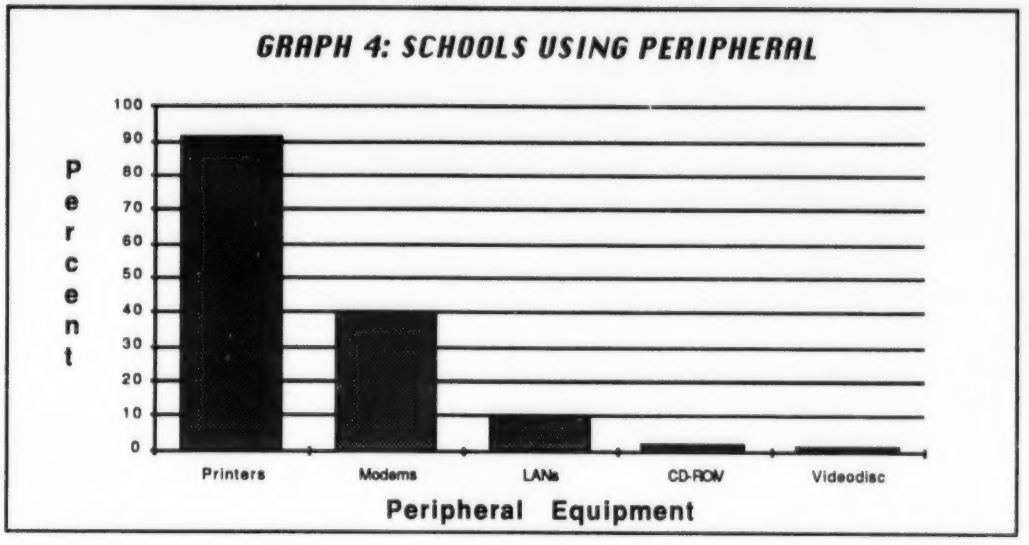
Printers: Overall, 615 schools reported having 3,059 printers. This represents a 17% increase since the 1987-88 survey.

Modems: Two hundred and seventy-two (272) schools reported having modems as compared to 231 schools in the last survey. There was a total of 401 modems reported. This figure is up 20.4% over the previous year.

Local-Area Networks: Sixty-seven (67) schools indicated that they had local-area networks. The most common local-area network mentioned was NOVELL (23).

CD-ROM/ Video Disc: Fifteen schools reported having 25 CD-ROM devices, while 7 schools reported a total of 15 video disc players.

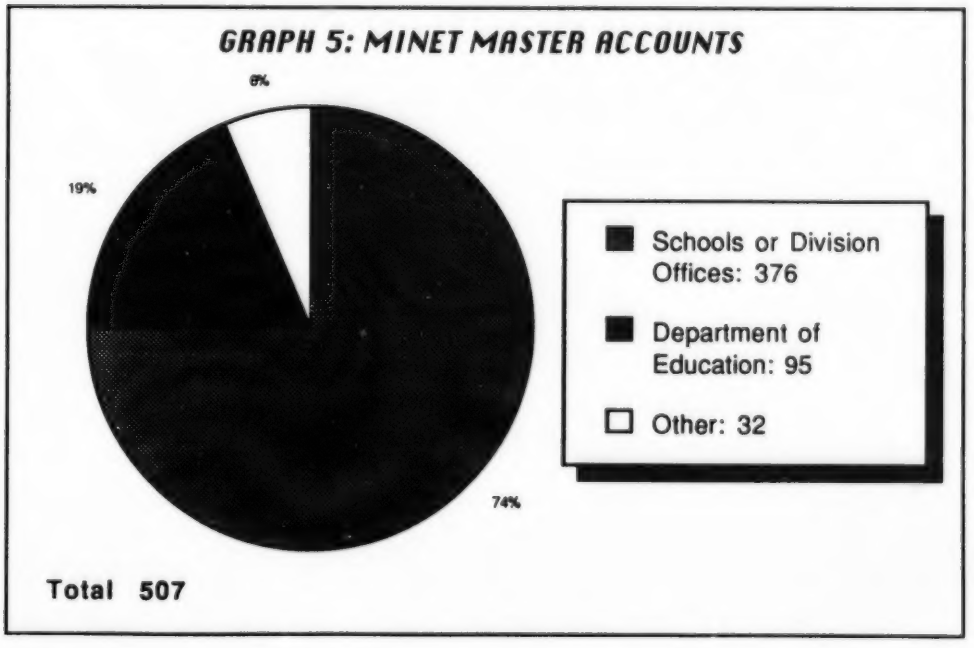
Graph 4 illustrates the percentage of schools with each type of the peripheral equipment discussed above.



VI. MINET

Overall, 507 MINET master account numbers were issued in 1988-89 with 376 residing in schools or school division offices, 95 in the Department of Education and Training, Community Colleges and Universities and 32 in other agencies (Graph 5).

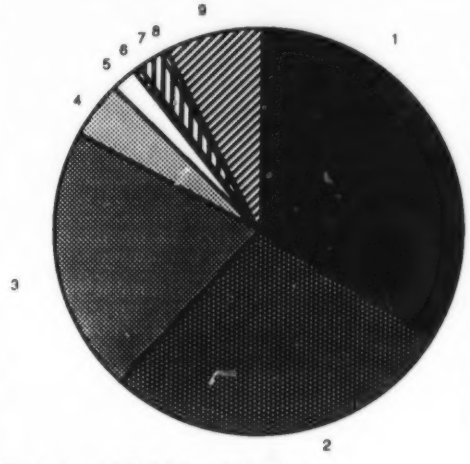
The total number of sub-accounts was 659.



VII. COMPUTER STUDIES COURSE ENROLLMENTS

In total, 678 schools reported that there were 108,758 students enrolled in computer-related courses at the time of the survey. This represents a decrease of approximately 6,500 students since the time of the last survey. The largest decrease of student enrollments was found in computer awareness courses at the 7-9 level. The only increase in the enrollment figures was in the proportion of students enrolled in "other" computer courses from 4,108 in 1987-88 to 7,972 in 1988-89. Graph 6 illustrates the distribution.

GRAPH 6: COMPUTER STUDIES COURSE ENROLLMENTS



1. K-3 Computer Awareness	36,611	(34%)
2. 4-6 Computer Awareness	30,701	(28%)
3. 7-9 Computer Awareness	23,121	(21%)
4. Computer Awareness 105	4,755	(4%)
5. Data Processing 202	2,128	(2%)
6. Data Processing 302	821	(1%)
7. Computer Science 205	1,982	(2%)
8. Computer Science 305	667	(1%)
9. Other Computer Courses	7,972	(7%)

Total 108,758 (100%)

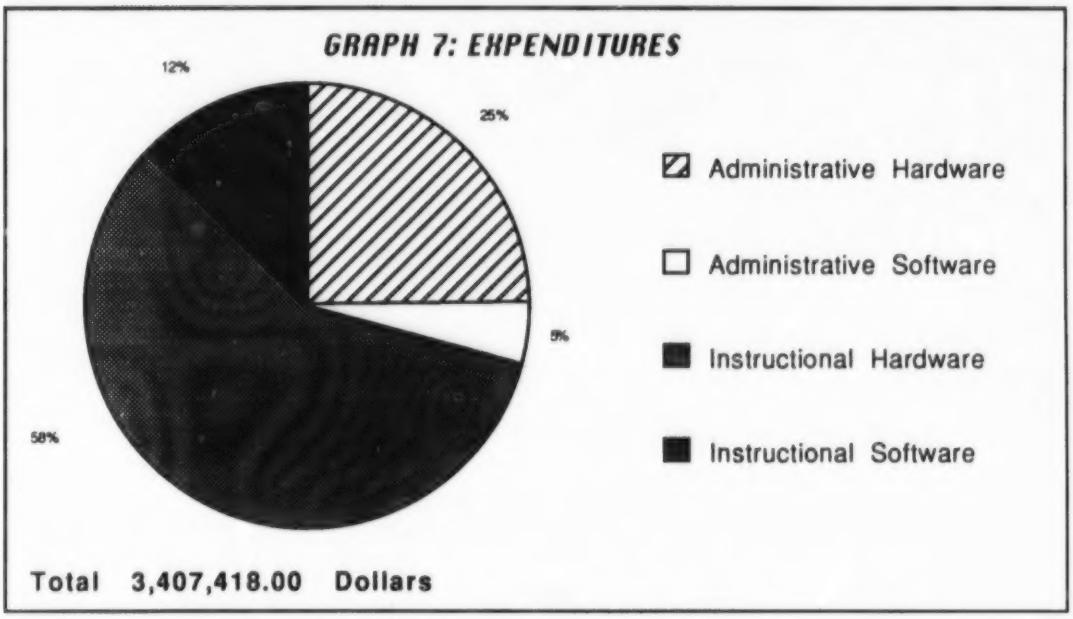
VIII. STUDENT-TO-COMPUTER RATIO

At the time of the 1988-89 survey, the Province of Manitoba had approximately 200,000 students and over 10,200 computing units within K-12 schools. Therefore, the overall student-to-computer ratio is calculated at approximately 20:1. This ratio should not be interpreted to mean that 20 "real" students attempt to share each computer in Manitoba but rather that as an overall statement of computer saturation, the provincial ratio can be expressed in this way.

IX. EXPENDITURES

Schools reported spending $2,826,340 on educational technology hardware and $581,078 on software during the 1988-89 school year (Graph 7).

	1987 - 88	1988 - 89
Administrative Hardware	$695,346.00	$845,677.00
Administrative Software	$159,666.00	$154,477.00
Instructional Hardware	$1,415,907.00	$1,980,663.00
Instructional Software	$406,754.00	$426,601.00
TOTAL	$2,677,673.00	$3,407,418.00



X. DISTANCE EDUCATION

Schools reported owning a total of 402 black-and-white televisions. No schools reported plans to purchase any further black-and-white televisions.

Schools reported owning a total of 1,432 colour televisions. Of this number 72% (1,029) are over 20" in size. Schools reported plans to purchase a further 91 colour televisions during the next school year.

Schools reported owning a total of 1,352 VCR units of which 74% (1,004) were VHS. Schools reported plans to purchase a further 98 VCRs during the next school year. There was a total of 6,757 videotape recordings owned by schools.

Schools reported owning a total of 1,385 16mm film projectors with plans to purchase an additional 25 during 1989-90. There was a total of 311 films owned by schools.

Schools reported owning a total of 17 FAX machines, with 10 additional schools planning to purchase a FAX machine during 1989-90 (Graph 8).